

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: TODD EVAN SCHLESINGER

For: MUSICAL INSTRUMENT STRINGS WITH POLYMER TREATED SURFACE

Filed: November 26, 2001

Serial No.: 10/002789 Art Unit: 2837 Examiner: FLETCHER, Marlon

15/Response
shyrefa
4/3/03

RESPONSE TO OFFICE ACTION

Honorable Commissioner of Patents and Trademarks
Patent and Trademark Office
Washington, D.C. 20231

TECHNOLOGY CENTER 2800

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Sir:

In response to action dated October 23, 2002, Applicant respectfully requests reconsideration in light of the following.

Paragraph 1 of the Action is acknowledged but requires no response.

Paragraph 2 of the Action rejects Claims 1-7 and 13-20 as obvious in view of Hebestreit (5,907,113) and Ito (5,578,775). Applicants respectfully disagree that the application of Ito to Hebestreit would have been obvious to one of ordinary skill in the art. While Ito and Hebestreit do indeed provide alternative applications of a polymer to a surface, no argument has been provided to establish why one of ordinary skill in the musical string industry would have been motivated to combine the two references; to the contrary, as indicated in the Specification, polymer vapor deposition offers a solution to a known problem in the music string industry:

"Frequent comments from musicians using competitive "coated" strings is that while they enjoy the benefit of improved feel and longer lasting strings, there is a distinct deadening of the sound....In a polymer vapor treated string surface, the damping factor is minimized due to reduction of out of phase vibration. The disclosed invention thus allows treatment of all the strings, high frequency (treble) and lower frequency (bass) alike, constituting a "set" of strings...Acoustic measurements of the increased damping present in competitive "laminated" or "coated" products compared to a polymer vapor treated string bear this out."

Polymer vapor treatment produces this desired result. As noted in the Specification (see, for example, p. 14 line 18-21, p. 15 lines 506) the disclosed invention results in the creation of a thin nanoporous polymer layer. It is believed that this nanoporosity is responsible for minimal constraint of the natural resonances of the string; i.e. no damping. The disclosed

invention also results in the radiation hardening of polymer exposed to RF plasma environment (see, for example, p.3 lines 15-18). It is believed that this gives rise to a more wear resistant layer applied to the strings. Hebestreit does not teach polymer vapor treatment and Ito does not suggest its use on musical instrument strings.

Applicant therefore requests that the obviousness rejections of Claims 1-7 and 13-20 be withdrawn.

Paragraph 3 acknowledges patentable subject matter, but objects to the form of Claims 8-12. The objection appears to be based on a perceived dependence on a rejected claim. Claim 8, however, is an independent claim, and each of Claims 9-12 depend only on Claim 8 or 10. Applicant requests reconsideration and either allowance of Claims 8-12 or clarification of the objection.

Paragraph 4 is acknowledged, but requires no response.

As required by its duty of disclosure, Applicant is filing herewith a supplemental Information Disclosure Statement identifying additional information which has come to its attention since filing. The Journal of Materials Research articles (Lee, et. al, 1991 and Rao et. al., 1993), and Banks et. al. (1992) provide possible explanations of the mechanism which may be responsible for improved acoustic response, and U.S. Patent 6,153,269 (Gleason 2000) discloses chemical vapor deposition of polymers for medical, as opposed to musical, instruments. Gleason specifically avoids increased cross linking of the polymer. As noted above, Applicant believes that the disclosed invention results in a nanoporous structure, with increased hardening of the polymer during deposition, which distinguishes it from the cited references.

Favorable action is solicited.

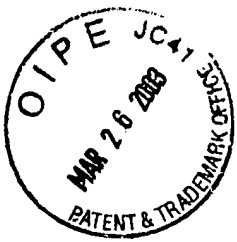
If resolution of the above issues could be expedited by a telephone interview, the Examiner is invited to contact the undersigned.

Respectfully submitted,



Max Stul Oppenheimer
Reg. No. 33,203
P. O. Box 50
Stevenson, MD 21153
410-633-8133 ext. 1093

Dated: March 21, 2003



COVER PAGE

TITLE: MUSICAL INSTRUMENT STRINGS WITH POLYMER TREATED SURFACE

INVENTOR: TODD EVAN SCHLESINGER

ASSIGNEE: Innovative Materials, Inc.

SERIAL NO.: 10/002.789

FILING DATE: November 26, 2001

RELATED APPLICATIONS:

This application is entitled to, and claims the benefit of, priority from the following United States Provisional Applications:

60/253,211 for "Musical Strings" filed 11/27/00
60/265,274 for "Improved Strings for Musical Instruments" filed 1/31/01
60/326,418 for "Musical Strings" filed 10/02/01
60/330,018 for "Vapor Deposited Polymer Coating" filed 10/18/2001

**PAPER: POWER OF ATTORNEY
RESPONSE TO 10/23/02 OFFICE ACTION
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

FILED: March 21, 2003

PATENT ATTORNEY:

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ATTORNEY DOCKET #: ASE0101

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Filed: November 26, 2001

Serial No.: 10/002789 Art Unit: 2837 Examiner: FLETCHER, Marlon T.

TRANSMITTAL LETTER

March 21, 2003

Honorable Commissioner of Patents and Trademarks
Patent and Trademark Office
Washington, D.C. 20231


Sir:

Transmitted for filing in the above-referenced case are:

Power of Attorney
Petition for Extension of Time
Response to 10/23/02 Office Action
Supplemental Information Disclosure Statement
Certificate of Mailing
Return Postcard

Authorization to charge our Deposit Account is enclosed.

Respectfully submitted,


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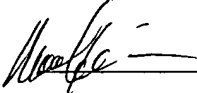
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CERTIFICATE OF MAILING

I HEREBY CERTIFY that on the date indicated above, the above-listed document(s) or fee(s) are being mailed by first class mail, postage prepaid to the Commissioner of Patents and Trademarks, Washington DC 20231.





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In re Patent Application of: **TODD EVAN SCHLESINGER**

For: **MUSICAL INSTRUMENT STRINGS WITH POLYMER TREATED SURFACE**

Filed: November 26, 2001

Serial No.: 10/002789 Art Unit: 2837 Examiner: FLETCHER, Marlon T.

Authorization to Charge Deposit Account

March 21, 2003

Honorable Commissioner of Patents and Trademarks
Patent and Trademark Office
Washington, D.C. 20231

Sir:

Transmitted for filing in the above-referenced case are:

**Response to Office Action and related documents
Supplemental Information Disclosure Statement**

The Commissioner is authorized to charge any additional fees relating to the above filing or credit any overpayment to our Deposit Account No. 15-0620. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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